

REMARKS/ARGUMENTS

Reconsideration and allowance of the present application based on the following remarks are respectfully requested.

Upon entry of the above amendments, claims 1-4 and 6-21 will be pending. Claims 1-12 have been amended to reflect an apparent overall density of 55-150 kg/m³. New claims 16-20 have been added to more distinctly claim the Applicants' invention, and are supported throughout the specification, for example, at page 5, lines 16-17.

Claims 1-15 stand rejected under 35 U.S.C. §112, second paragraph. The Applicants assert that the above amendments fully address these rejections. With regard to the Examiner's rejection of claim 1 over the "basis for the oxyethylene percent content," Applicants submit that the claim language refers to an oxyethylene content of at least 50% by weight based on the weight of polyether polyol.

With regard to the Examiner's rejection of claims 13-15 under 35 U.S.C. §112, first paragraph, it is submitted that "apparent overall density" is a term of art that is readily understood by the skilled artisan to refer to bulk density. Evidence reflecting the common understanding of this term within the art is attached (*see* reference to the ISO 845:1988 test, as referenced in the specification, page 12, lines 7-8; and an excerpt from "Hawley's Condensed Chemical Dictionary, 12th Ed."). Both references indicate that this term is understood to mean "bulk density." Withdrawal of these rejections is, therefore, respectfully requested.

Claims 13-15 stand rejected under 35 U.S.C. §102(b) as anticipated by Bleys *et al.* ('779) or Eling *et al.* ('483). Applicants respectfully traverse this rejection for at least the following reasons.

These references do not discuss a process for forming flexible molded foams with densities as claimed in the instant invention. Specifically, the references discuss free rise foams (*i.e.*, unmolded foams, *see, e.g.*, Eling '483 at Col. 4, lines 26-27) or molded foams with densities different than those of the present invention.¹

These shortcomings are not addressed by Mackey ('409), Mackey ('553) or Mackey ('528). Specifically, it is worth noting that all three Mackey references set out to make

¹ Example 5 of Eling describes a molding wherein 70g of a polyurethane reaction mixture are placed in a cell 15 x 10 x 1 cm. Assuming all material remains in the mold, this technique would produce a foam with a density of over 460 kg/m³.


relatively heavy, dense materials by structural reaction injection molding, to form "interior trim substrates for automobiles, such as door panels, package trays, speaker enclosures and seat pans." This difference is significant as the moldings of Mackey have a greater mechanical integrity (and different mold release issues) than the flexible foams of the present invention, and thus Mackey provides the skilled artisan with no reasonable expectation of successfully releasing the foams of the present invention with these release agents. Accordingly, withdrawal of these rejections is respectfully requested.

Therefore, all objections and rejections having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited.

Should any issues remain unresolved, the Examiner is encouraged to contact the undersigned attorney for Applicants at the telephone number indicated below in order to expeditiously resolve any remaining issues.

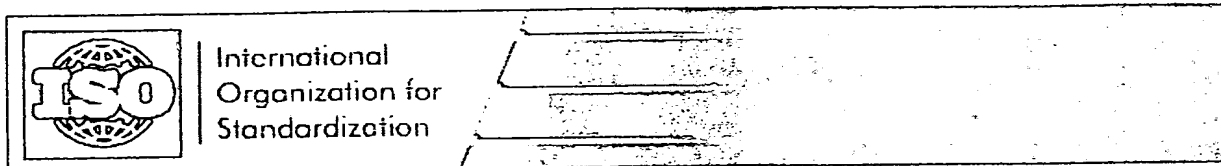
Respectfully submitted,

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Date: November 26, 2003
Attachments: ISO 845:1988 test
Hawley's Condensed Chemical Dictionary excerpt

**ISO 845:1988****Cellular plastics and rubbers -- Determination of apparent (bulk) density**

Edition:	2 (Monolingual)
Number of pages:	3
Technical committee / subcommittee:	TC 61/SC 10
ICS:	83.100
Stage:	90.92
Stage date:	2003-08-19

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ISO 845:1988 PDF version (en)	CHF 40,00	992 KB
ISO 845:1988 PDF version (fr)	CHF 40,00	669 KB
ISO 845:1988 paper version (en)	CHF 40,00	
ISO 845:1988 paper version (fr)	CHF 40,00	

Abstract

Specification of a method for determining the apparent density or the bulk density of rigid, semi-rigid or flexible cellular plastics and rubbers. If the material to be tested includes skins formed during moulding, the apparent overall density or the apparent core density may be determined. Each test piece shall be of a shape, that its volume can be easily calculated.

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Demjanov rearrangement. Deamination of primary amines by diazotization to give rearranged alcohols.

Democritus. A Greek philosopher (approximately 465 BC). The first thinker of record to conceive of matter as existing in the form of small indivisible particles, which he called atoms. However, this concept was overshadowed by Aristotle's theories, and it was not until some 2000 years later that it was developed by John Dalton in England—an astonishing length of dormancy for one of the most creative ideas in the history of science.

See also Dalton, John.

demulsification. The process of destroying or "breaking" an unwanted emulsion, especially water-in-oil types occurring in crude petroleum. Both chemical and physical means are used. Chemical means include addition of polyvalent ions to neutralize electrical charges or of a strong acid; physical means include heating, centrifuging, or use of high-potential alternating current.

See also emulsion, nonylphenol.

demurrage. A fee imposed on shippers of chemicals and other products by the railroads for retaining freight cars at loading docks for more than a given period of time (usually 24 hr).

"DEN" [Dow]. TM for a series of epoxy novolacs for multifunctional resins for all uses where maximum chemical or heat resistance is required.

denatonium benzoate. USAN for benzyldiethyl-[(2,6-xylylcarbonyl)methyl]ammonium benzoate (Bitrex), a bitter-tasting compound approved as a denaturant for alcohol, mp 165°C, soluble in water and alcohol, insoluble in ether.

denaturant. See alcohol, denatured.

denaturation. A change in the molecular structure of globular proteins that may be induced by bringing a protein solution to its boiling point or by exposing it to acids or alkalis or to various detergents. Denaturation reduces the solubility of proteins and prevents crystallization. It involves rupture of hydrogen bonds so that the highly ordered structure of the native protein is replaced by a looser and more random structure. It is usually irreversible but in some cases is reversible, depending on the protein and the treatment involved.

See also degradation.

denatured alcohol. See alcohol, denatured.

denier. A unit used in the textile industry to indicate the fineness of a filament. If 9000 meters of a filament weighs 1 gram, the filament is 1 denier; if 10,000 meters weighs 1 gram, the filament is 1 grex. Sheer women's hosiery usually runs from 15 to 10 denier.

"Denox" [Carus]. TM for 300 Highlighter series, a group of products.

Use: Treating denim with stone washing and other finishes.

density. Mass/unit volume expressed in grams/cubic centimeter for solids and liquids and usually in grams/liter for gases. Densities of some common substances follow:

	g/cc	g/L
sulfur	2.06	
aluminum	3.7	
sodium	0.967	
glycerol	1.27	
water*	1.0	
chlorine		3.214
carbon dioxide		1.977
air**		1.293
oxygen		1.429
hydrogen		0.0899

*Basis of comparison for solids and liquids.

**Basis of comparison for gases. For discussion of density vs specific gravity, see specific gravity. Apparent density is the mass of a unit volume of powder, usually expressed in grams per cubic centimeter, determined by a specified method. (MPA definition, MPA Standard 9-50T). Bulk density is an alternative term for apparent density.

See also current density.

"Deo-Base" [Witco]. TM for light petroleum distillate, a superfine grade of kerosene without its objectionable odor.

deodorant. A substance used to remove or mask an unpleasant odor. It may or may not have a distinctive odor of its own. Deodorants act (1) by adsorption (activated carbon, charcoal, chlorophyllin), (2) by replacement (pine oil or other perfume), (3) by neutralization (aluminum chlorohydrate), and (4) by oxidation or hydrogenation, e.g., of fish oils. The cosmetic industry supplies a wide variety of deodorants and antiperspirants, chiefly based on neutralization. Mouthwashes and breath "sweeteners" often contain calcium iodate, thymol, peppermint, or a similar substance to mask or replace odors.

See also odor, cosmetic.

deoxidizer. An agent which removes oxygen from a compound or from a molten metal.

deoxy-. Prefix of hydroxyl pound. The desoxy and changeably.

deoxyanisoin. acetophenone $\text{CH}_3\text{OC}_6\text{H}_4\text{CO}$
Properties: Of with a sweet, 110-112°C.
Use: Intermedi

deoxybenzoin. phenyl ketone
Properties: C slightly soluble and ketones.
Use: Intermedi

deoxycholic acid
CAS: 83-44-3.
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Derivation: Iso sis.
Grade: Technic
Use: Medicine, j cortisone, emu 0.1%).

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Properties: Cry Freely soluble i
Derivation: Fro sis from other s
Use: Medicine (u

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